

WEST Search History

DATE: Friday, August 05, 2005

Hide?	Set Name	Query	Hit Count
		<i>DB=USPT; PLUR=YES; OP=AND</i>	
<input type="checkbox"/>	L9	L8 and pemf	0
<input type="checkbox"/>	L8	robert.in. and fitzsimmons.in.	32
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=AND</i>	
<input type="checkbox"/>	L7	vegf and pemf	4
		<i>DB=USPT; PLUR=YES; OP=AND</i>	
<input type="checkbox"/>	L6	vegf and pemf	1
<input type="checkbox"/>	L5	6561968	4
<input type="checkbox"/>	L4	6561968 and hertz	0
<input type="checkbox"/>	L3	6334069 and hertz	1
<input type="checkbox"/>	L2	L1 and hertz	15
<input type="checkbox"/>	L1	5100373	28

END OF SEARCH HISTORY

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 12:15:25 ON 05 AUG 2005

=> file medline biosis caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'MEDLINE' ENTERED AT 12:15:57 ON 05 AUG 2005

FILE 'BIOSIS' ENTERED AT 12:15:57 ON 05 AUG 2005

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=> vegf and pemf

L1 1 VEGF AND PEMF

=> d ti abs so l1

L1 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Pulsed 50 Hz electrical fields cause activation of tyrosine kinase related
cellular signalling in PAE cells and stimulate angiogenesis.

AB We investigated to which extent pulsed electrical fields can activate
endothelial cells and cause enhanced cellular signalling and angiogenesis.
Pulsed fields were imposed on tissues by use of coils that create pulsed
electromagnetic fields (**PEMF**) that, in turn, creates pulsed
electrical fields of a magnitude of 1-10 mV/cm in the tissue. To test the
effects we used the methods of western blotting, HPLC and fluorescence
microscopy. We found, that **PEMF** activate cellular signalling
related to tyrosine kinase receptor function since it evokes increased
phosphorylation of **VEGF** receptor 2 (KDR), Src, PLC γ , Akt,
eNOS and the MAP kinase ERK1/2. As a consequence of PLC γ ;
phosphorylation a significant increase in inositol trisphosphate was also
observed. We propose that the Src enzyme is the sensor or is located
close to the site that senses the changes in the electrochemical potential
of protein charges, since PP1, an inhibitor of Src, inhibits the
signalling processes evoked by **PEMF**. In order to test the
mechanism in intact tissues, we used chick embryo chorioallantoic membrane
as a model and found that in fertilized eggs, exposed to continuous
PEMF, angiogenesis was enhanced after 24 hours (measured as small
vessels pr area and number of branches pr area). Thus, **PEMF**
induces angiogenesis through activation of MAP kinase signalling
presumably through a sensor closely associated with the KDR receptor,
possibly the Src kinase.

SO FASEB Journal, (2004) Vol. 18, No. 4-5, pp. Abst. 669.6.

<http://www.fasebj.org/>. e-file.

Meeting Info.: FASEB Meeting on Experimental Biology: Translating the
Genome. Washington, District of Columbia, USA. April 17-21, 2004. FASEB.
ISSN: 0892-6638 (ISSN print).

=> pemf

L2 518 PEMF

=> 12 and 1970-2001/py

2 FILES SEARCHED...

L3 394 L2 AND 1970-2001/PY

=> 13 and ?osteo?

L4 111 L3 AND ?OSTEO?

=> l4 and ?angio?

L5 0 L4 AND ?ANGIO?

=> l4 and vascul?

L6 1 L4 AND VASCUL?

=> d ti abs so l6

L6 ANSWER 1 OF 1 MEDLINE on STN

TI The effects of pulsed electromagnetism on fresh fracture healing:
osteochondral repair in the rat femoral groove.

AB Some clinical studies have claimed significant reductions in the healing time of fresh fractures with the use of pulsed electromagnetic fields (**PEMFs**). Animal models, however, have produced more equivocal results. This investigation examined the effects of **PEMF** treatment on an **osteochondral** defect placed in the patellofemoral groove of the rat. The results indicated that **PEMF** enhances early **vascular** reaction and suppresses initial pannus proliferation. Early chondrogenesis and bone formation were consistently stimulated, and the restoration of normal bone trabeculae advanced. Pulsed electromagnetic field treatment therefore may be useful in advancing repair during the early proliferative stage. Later results were variable and suggest that prolonged use may have deleterious effects, enhancing chondrogenesis beyond a point observed in normal repair and thus delaying normal subsurface trabeculation.

SO Orthopedics, (1998 Mar) 21 (3) 297-302.
Journal code: 7806107. ISSN: 0147-7447.

=> fitzsimmons?/au

L7 2111 FITZSIMMONS?/AU

=> l7 and robert?/au

L8 27 L7 AND ROBERT?/AU

=> l8 and pemf

L9 0 L8 AND PEMF

=> d his

(FILE 'HOME' ENTERED AT 12:15:25 ON 05 AUG 2005)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 12:15:57 ON 05 AUG 2005

L1 1 VEGF AND PEMF

L2 518 PEMF

L3 394 L2 AND 1970-2001/PY

L4 111 L3 AND ?OSTEO?

L5 0 L4 AND ?ANGIO?

L6 1 L4 AND VASCUL?

L7 2111 FITZSIMMONS?/AU

L8 27 L7 AND ROBERT?/AU

L9 0 L8 AND PEMF

=> logoff

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